

# VIBRATORY LEVEL SENSOR

The vibratory / tuning fork level sensor provides reliable point level detection in a wide variety of process control applications in bins, silos and hoppers, filled with grained or powdered materials or for liquids in a tank. The vibrating probe principle eliminates problems associated with temperature, humidity and material changes, while providing state-of-the-art electronic reliability and accuracy that requires no calibration.

The vibratory level sensor utilizes piezoelectric technology to create a vibration and then constantly monitors the presence or absence of that vibration. The electronically stimulated fork vibrates at its mechanical resonance frequency of 400 Hz when the fork is free of the service material.

This vibration causes physical deformation of a second crystal which generates a voltage to be analyzed by the electronic circuitry. If the fork is covered by the bulk material, a damping effect is produced and the piezo-crystal does not produce the voltage and the amplifier will switch and a corresponding signal output is actuated. The vibration of the fork has self-cleaning properties.

This switch is available in 4 types of configuration namely standard, extended pipe, flexible cable extension and remote electronics for high temperature.

## Salient Features

- ✚ Suitable for level detection for Wide range of material density
- ✚ Unaffected by Environmental and Material Changes
- ✚ Multiple Configurations for a Wide Range of Applications
- ✚ Fast and Easy Installation-No Calibration required
- ✚ Field selectable operation logic.-Can be configured either for High or Low Level point switching.

## Application

Powdered Milk, Peanuts, Frozen Potato Chips, Tobacco, Beans, Wood Shavings, Sugar, Chalk, Sweets, Coffee, Powdered Cellulose, Glass, Granular Plastics, Tea (Leaf), Gravel, Salt, Powdered Clay, Flour, Polystyrene Powder, Foundry Sand, Styrofoam, Spices, Soda, Animal Food, Soot, Dry Pellets Etc



## TECHNICAL SPECIFICATIONS (STANDARD):

MODEL : VLS-100

### SWITCHING UNIT:

Housing : Aluminum, weather proof, powder coated. Integral with The probe suitable for back panel mounting.

Cable entry : 2 nos.

Ambient temperature : 0 ° C to +60° C

Power consumption : 2 VA

Mains Voltage : 230/110 V AC (+/-15%), 50 Hz or 24 V Dc

Output : 2 sets of potential free c/o contacts rated at 5 amps, 230 V AC for non-inductive loads.

Switching delay : Continuously adjustable from 2 to 20 sec. probe free or probe covered.

Safety operation : Field selected switch over for min. or max. (FSL/FSH) switching points.

Switch status display : Green LED shows Normal, Red LED shows alarm.

### FORK (SENSING PROBE):

Mounting : Screwed – 1 " BSP (standard) Or Flanged (optional)

Sense : Fork, Stainless steel

Extension : Pipe

Length : 120 mm (standard) upto 3000 mm and as per application.

Operating Temp in : 150 deg for the integral switching vessel unit. (Standard)



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